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ABSTRACT

As part of a study of two-year instructional opportunities, this paper discusses the structure of associate degrees in Indiana according to the amount of general education required, degree designations used by public institutions in concert with program major designations, and what these requirements and designations imply for transferability. The paper opens with a list of previous working papers related to two-year instructional opportunities in Indiana, a description of terminology used in the analysis, and policy statements for associate degree programs developed by the American Association of Community Colleges (AACC). Next, the paper examines the associate degree programs in Indiana, indicating that the associate of science (AS), the most common degree, is used for career-oriented or transfer programs and the associate of arts (AA) designation is used infrequently and most often designates a liberal arts or general studies degree program. Information from other states is then provided, indicating that ratio of associate degrees conferred by two-year institutions to those by four-year institutions was 1 to 1 in Indiana but 10 to 1 for the nation as a whole. Appendixes include a list of selected out of state degree designations and purposes, policy statements by the AACC, and background information on selected states with a significant public technical college presence. (TGI)

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ED 395 640

COMMISSION FOR HIGHER EDUCATION
Friday, March 8, 1996

DISCUSSION ITEM E: **The Structure of Two-Year Degrees: Working Paper**

Staff Recommendation For information only.

Background

As part of the Commission for Higher Education's study of two-year instructional opportunities, the Commission has periodically discussed working papers on a variety of topics over the past year:

- Transfer of general education credit from Ivy Tech to four-year institutions;
- Ivy Tech program transfer agreements with universities,
- Methods by which secondary students can earn postsecondary credit;
- Educational attainment of Indiana's population,
- Degree production of Indiana institutions; and
- Mobility of postsecondary graduates.

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The present working paper discusses the structure of associate degrees in Indiana from a number of perspectives: amount of general education required, degree designations (e.g. A.A., A.S., A.A.S.) used by public institutions in concert with program major designations (e.g. Liberal Arts, Electrical Engineering Technology, Industrial Technology), and what these requirements and designations imply for transferability. In addition to data collected for Indiana, the working paper also reports data from other states and institutions.

Discussion of this working paper nearly completes the scope of activity envisioned in the original workplan of the project on two-year instructional opportunities.

Supporting Document *The Structure of Two-Year Degrees: Working Paper*, February 29, 1996

JC 960 394

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THE STRUCTURE OF TWO-YEAR DEGREES:

WORKING PAPER*

February 29, 1996

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*A working paper is a staff paper prepared to elicit discussion of particular issues. It does not necessarily represent the opinion of the Commission or of individual members.

Previous Working Papers

Since early in 1995, the Commission for Higher Education has periodically reviewed working papers on a variety of topics related to better understanding and analyzing two-year instructional opportunities in the state:

- Transfer of general education credit from Ivy Tech to four year institutions;
- Ivy Tech program transfer agreements with universities;
- Methods by which secondary students can earn postsecondary credit;
- Educational attainment of Indiana's population;
- Degree production of Indiana institutions; and
- Mobility of postsecondary graduates.

This working paper nearly completes the scope of activity envisioned in the original workplan of the project on two-year instructional opportunities.

Background

Before analyzing the information gathered for this working paper, it might be useful to review selected data previously assembled on two-year instruction.

Educational Attainment and Degree Production

In April 1995, the Commission discussed a working paper on Indiana's educational attainment and degree production in national context. The analysis reported that, based on 1990 data, Indiana's educational attainment levels were consistently below national levels (see Graph 1) with respect to associate (-14.3%), baccalaureate (-29.7%), and graduate/professional degrees (-11.8%). The analysis also revealed that Indiana's degree production rates at the baccalaureate and graduate/professional levels were above the national rate (19.9% and 4.5%, respectively), while the state's production rate at the associate degree level was 14.4% below the national average.

Degrees Awarded by Campus, FY1995

In FY1995, Indiana public institutions conferred a total of 7,343 associate degrees, 20,645 baccalaureate degrees, and 5,551 master's degrees (see Table 1). Four institutions conferred the vast majority of the associate degrees awarded by public institutions -- Ivy Tech State College (2,219), Purdue University (1,653), Vincennes University (1,515), and Indiana University (1,331).

Graph 1

INDIANA'S PRODUCTION RATES AND ATTAINMENT LEVELS RELATIVE TO THE NATIONAL AVERAGE

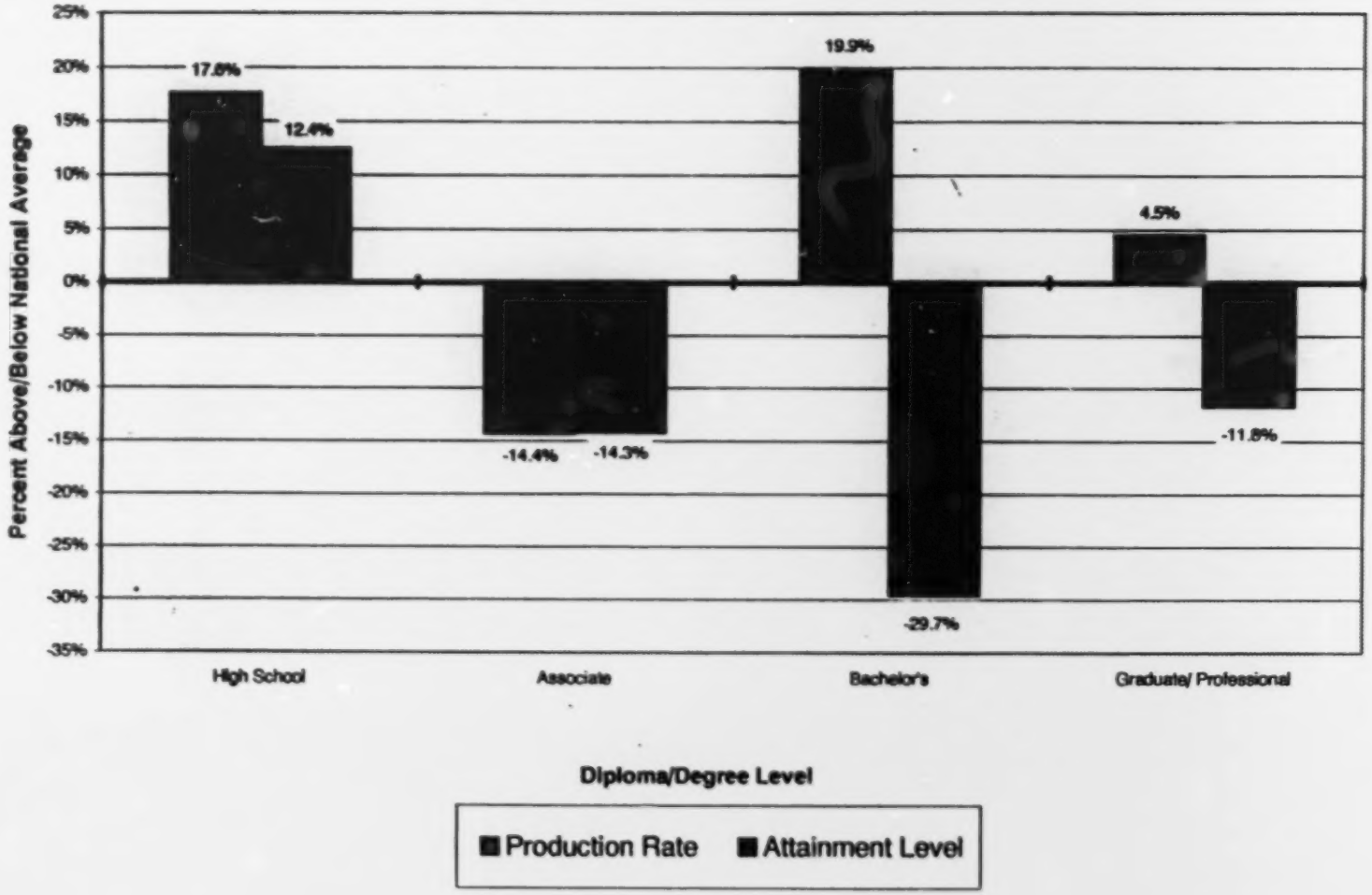

Table 1

UNDERGRADUATE AND MASTER'S DEGREES AWARDED
BY LEVEL AND CAMPUS, FY1995

	Associate		Bachelor's	Master's
Indiana University				
IU-Bloomington	62		5,076	1,810
IU-East	99		123	0
IU-Kokomo	111		174	21
IU-Northwest	286		354	122
IU-South Bend	166		534	205
IU-Southeast	75		452	67
IUPUI	532		2,124	608
Subtotal-Indiana University	1,331		8,837	2,833
Purdue University				
PU-West Lafayette	633		5,185	1,273
PU-Calumet	269		661	124
PU-North Central	243		126	0
IUPU-Fort Wayne	508		697	142
Subtotal-Purdue University	1,653		6,669	1,539
Indiana State University	214		1,337	408
University of Southern Indiana	158		648	60
Ball State University	253		3,154	711
Subtotal - Four-Year Institutions	3,609	49.1%		
Vincennes University	1,515		0	0
Ivy Tech State College				
ITSC Reg 01 - Gary	117		0	0
ITSC Reg 02 - South Bend	190		0	0
ITSC Reg 03 - Fort Wayne	224		0	0
ITSC Reg 04 - Lafayette	125		0	0
ITSC Reg 05 - Kokomo	117		0	0
ITSC Reg 06 - Muncie	177		0	0
ITSC Reg 07 - Terre Haute	166		0	0
ITSC Reg 08 - Indianapolis	330		0	0
ITSC Reg 09 - Richmond	100		0	0
ITSC Reg 10 - Columbus	183		0	0
ITSC Reg 11 - Madison	86		0	0
ITSC Reg 12 - Evansville	253		0	0
ITSC Reg 13 - Sellersburg	151		0	0
Subtotal-Ivy Tech State College	2,219		0	0
Subtotal - Two-Year Institutions	3,734	50.9%		
Total-All Institutions	7,343	100.0%	20,645	5,551

Source: Commission for Higher Education, Student Information System

Two-year institutions conferred slightly more associate degrees (3.734 or 50.9 percent) in FY1995 than the four-year institutions (3,609 or 49.1 percent).

Student Movement from Two-Year to Four-Year Institutions

In 1993, the Commission for Higher Education participated in a project funded by the Ford Foundation and conducted by the UCLA Center for the Study of Community Colleges to increase understanding of the movement of students and the transfer of credit from two-year institutions to four-year institutions. The Center collected data from states (including Indiana) on the number of students who had no prior college experience before entering two-year colleges in 1987, who earned at least 12 credits during the next four years, and who took classes at a public, in-state university during these same four years.

For the nation as a whole, the UCLA Center found that 22.6 percent of students meeting these criteria were enrolled in a four-year institution. Using data on the same type of student attending Vincennes University and Ivy Tech State College, the analysis also revealed that 10.6 percent of Indiana two-year students, or about one-half the national percentage, wound up at a four-year institution.

Recently made available data for FY1995 from Indiana's Student Information System, which is the basis for the completion analysis also appearing in this agenda, can be reanalyzed to provide a more current Indiana point of reference for the most recent national data collected by the UCLA Center for the Study of Community Colleges.

Although data on transfer of credit from the UCLA study is not presently available to the Commission, the Commission's own Student Information System will supply transfer of credit beginning with the FY1996 data, which should be ready for analysis by the beginning months of 1997. At that time, it will be possible to report the number of semester credit hours that two-year students were able to transfer to four-year institutions.

Questions Addressed by the Working Paper

This working paper addresses the six following questions:

1. How widely and how consistently are different degree designations (e.g. Associate of Science, Associate of Applied Science) used in Indiana?

2. How are the different degree designations used in concert with different program major designations (e.g. Liberal Arts, Mechanical Engineering Technology)

3. How many general education credit hours are typically required for each of the different degree designations?

4. What do the different degree designations imply with respect to transferability and employment?

5. How do the answers to these questions for Indiana compare with what other states are doing?

6. What are the recent trends in states that have technical colleges as a significant component of their public education systems?

Terminology

For purposes of this analysis, the name of a **degree program** (e.g. Associate of Science in Mechanical Engineering Technology) consists of two parts, the degree designation and the program major designation. The **degree designation** refers to the particular type of degree -- "Associate of Arts," "Associate of Science," "Associate of Applied Arts," etc. -- that a student will receive upon graduation. An institution typically uses the degree designation in concert with a **program major designation** -- "General Studies," "Mechanical Engineering Technology," "Industrial Technology," etc. -- to describe more specifically the area of emphasis the student has pursued during his or her studies at the institution.

Indiana institutions, like most institutions that offer associate degrees across the nation, use three degree designations to describe their degree programs: the Associate of Arts (A.A.), the Associate in Science (A.S.), and the Associate in Applied Science (A.A.S.), each of which will be described in later sections.

AACC Policy Statements

The American Association of Community Colleges (AACC) has developed policy statements for A.A., A.S., and A.A.S. degree programs that can serve as a point of reference for subsequent discussion (see Appendix B). The statements are described here simply to provide a broader context for the working paper and not for any other purpose.

With respect to the **Associate of Arts** degree, the AACC policy statement indicates that

> *"These degrees primarily prepare the student to transfer to an upper division baccalaureate degree program ... The associate in arts degree gives emphasis to those majoring in the social sciences, humanities, arts, and similar subjects ... Students awarded associate in arts ... degrees should be accepted as junior level transfers in baccalaureate degree granting institutions."*

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According to the AACC policy statement for the **Associate of Science** degree, the A.S. has a purpose similar to that of the A.A. degree:

> *"These degrees primarily prepare the student to transfer to an upper division baccalaureate degree program ... The general trend has been to offer the associate in science degree to students who wish to major in engineering, agriculture, or the sciences with heavy undergraduate requirements in mathematics and science ... Students awarded ... associate in science degrees should be accepted as junior level transfers in baccalaureate degree granting institutions."*

The AACC policy statements suggest that A.A. and A.S. degree programs ought to draw their coursework from traditional liberal arts and science academic disciplines (such as English, history, chemistry, and mathematics) and they should transfer into a four-year program and should constitute the first two years of a baccalaureate degree in traditional academic disciplines. This is in contrast to the AACC policy statement for the **Associate of Applied Science**:

> *"Although the objective of the Associate in Applied Science degree is to enhance employment opportunities, some baccalaureate-granting institutions have developed upper division programs to recognize this degree for transfer of credits. This trend is applauded and encouraged ...*
>
> *"AAS degree curricula should be articulated with receptive and appropriate four-year institutions through the cooperative planning and implementation of transfer agreements including two + two curricula. Although AAS degree programs are designed primarily to prepare students for employment, they can no longer be considered terminal ... Further education, including work toward a baccalaureate degree, should be anticipated for AAS degree graduates .. However, the occupational outcomes of AAS degree programs should not be subverted to the transfer potential."*

Associate of Arts Degree Programs

Liberal/General Arts or Studies

Four of Indiana's seven public institutions offer A.A. programs in Liberal/General Arts or Studies (see Table 2A). Two of the institutions (Indiana University and Vincennes University) use the term Liberal Arts or Liberal Studies to describe Associate of Arts programs that provide students with a broad exposure to the liberal arts. Two other institutions (Ball State University and Indiana State University) use the terms General Arts or Studies to describe similar programs at their institutions. The A.A. degree programs in Liberal/General Arts or Studies at

Table 2A

ASSOCIATE OF ARTS (A.A.) DEGREES IN LIBERAL STUDIES: GENERAL EDUCATION REQUIREMENTS AT INDIANA PUBLIC INSTITUTIONS

	Degree	Credit Hours	Comments
Indiana University *	A.A. - Liberal Arts A.A. - Liberal Studies	33 30	Requirements are program and site specific.
Purdue University	N/A		No A.A. degrees offered in liberal studies.
Ball State University	A.A. - General Arts A.A. - General Studies	31 31	Requirements are program specific. General education requirements for baccalaureate degrees are taken into consideration when designing related associate degree programs.
Indiana State University	A.A. - General Studies	38	Campus-wide guidelines for 24 - 32 credit hours of general core courses; programs have flexibility in designing specific requirements.
University of Southern Indiana	N/A		No A.A. degrees offered in liberal studies.
Vincennes University**	A.A. - Liberal Arts	33	University requirement of minimum 35 credit hours of general core courses for A.A. degrees. Some of the general requirements may be met by program core courses.
Ivy Tech State College	N/A		No A.A. degrees offered.

Range of credit hours reported for all institutions is based on all programs offered, not a sample of programs.
*Indiana University also offers an Associate of General Studies (A.G.S.) degree program which requires 36 credit hours of general education.
**Vincennes University also offers an Associate of Science (A.S.) in Liberal Arts (23 general credits) and an Associate of Applied Science (A.A.S.) in General Studies (20 - 23 general credits).

these institutions require between 30-38 student credit hours in core general education courses, in addition to 30 or so credit hours in electives to complete the associate degree requirements.

Purdue University and the University of Southern Indiana offer A.A. degrees, but not in Liberal/General Arts or Studies. Ivy Tech State College, which offers a limited number (37) of general education courses in support of its technical programs and whose primary mission is clearly tied to the offering of career-oriented instruction, does not offer any Associate of Arts degree programs.

In all cases, the A.A. in Liberal/General Arts or Studies is designed to have all or almost all of the credits transfer into a baccalaureate degree.

Other A.A. Programs

The five public, four-year universities, along with Vincennes University, offer a limited number of Associate of Arts degree programs in fields other than Liberal/General Arts or Studies (see Table 2B). In some cases, the degree programs consist of a specific Liberal Arts discipline (e.g. English at Vincennes University) or a subset of Liberal Arts disciplines (e.g. Behavioral Sciences at Vincennes University) rather than Liberal Arts, which implies course requirements in all of the liberal arts.

In other cases, the A.A. degree program is career oriented -- e.g. Jazz and Commercial Music (IU), Early Childhood Development (Purdue), Business Administration (Ball State), Aviation Flight Technology (Indiana State), and General Communications (Southern Indiana). In still other cases, the A.A. degree program is a pre-professional program (e.g. Pre-Law and Pre-Optometry at Vincennes).

The A.A. degrees described in this section generally require about the same number of credit hours in core general education courses as A.A. degrees in Liberal/General Arts or Studies. However, in at least two A.A. programs -- one at IU and the other at Ball State -- the core general education credits is considerably less (12 and 16, respectively). Like the A.A. in Liberal Arts programs, the A.A. programs in a subset of Liberal Arts disciplines and the pre-professional programs are designed for transfer into a baccalaureate program. The A.A. programs in career-oriented fields are not designed for transfer into a four-year degree, although it appears that in practice they do transfer a significant amount of coursework.

Associate of Science Degree Programs

Each of Indiana's seven public institutions offers Associate of Science degree programs, and at each institution the A.S. designation is most frequently used in association with a career-oriented field -- e.g. Nursing, Electrical Engineering Technology, Printing, Computer Information Systems.

Based on the sample of programs used in this analysis, the core general education requirements for A.S. degrees range from 16 to 42 semester credit hours (see Table 3). Three public institutions -- Indiana University, Purdue University, and Ball

Table 2B

ASSOCIATE OF ARTS (A.A.) DEGREES IN SPECIFIC MAJORS: GENERAL EDUCATION REQUIREMENTS AT INDIANA PUBLIC INSTITUTIONS

	Range of Credit Hours	Comments
Indiana University	12 - 35	Only three additional A.A. programs are offered. One degree is career oriented (Jazz & Commercial Music); two degrees are in academic areas (e.g. Humanities). Requirements are program and site specific.
Purdue University	30	Only three A.A. programs are offered. Two degrees are career oriented (Early Childhood Development and General Business); one degree is in an academic area (Humanities). Requirements are program and site specific.
Ball State University	16 - 31*	Six additional A.A. programs are offered. These degrees are career oriented (e.g. Legal Assistance, Business Administration, Journalism). Requirements are program specific. General studies requirements for baccalaureate degrees are taken into consideration when designing related associate degree programs.
Indiana State University	24	Only one additional A.A. program is offered. The degree is career oriented and has an A.S. option (General Aviation Flight Technology).
University of Southern Indiana	34	Only one program is offered (General Communications). The degree is career oriented and has an A.S. option. The A.A. degree also requires 12 credit hours of foreign language.

Vincennes University	31 - 38*	Twelve additional A.A. programs offered. Four degrees are career oriented (e.g. Journalism, Theatrical Production); four degrees are pre-professional (e.g. Pre-Law, Pre-Optometry); and four degrees are in academic areas (e.g. English, Behavioral Sciences). University requirement is a minimum 35 credit hours of general core courses for A.A. degrees. Some general education requirements are met by program core courses.
Ivy Tech State College	N/A	No A.A. degrees offered.

* Based on a sample of programs.

Table 3

ASSOCIATE OF SCIENCE (A.S.) DEGREES: GENERAL EDUCATION REQUIREMENTS AT INDIANA PUBLIC INSTITUTIONS

	Range of Credit Hours	Comments
Indiana University	21 - 36	Requirements are program and site specific.
Purdue University	16 - 32	Requirements are program and site specific.
Ball State University	19 - 35	Requirements are program specific. General studies requirements for baccalaureate degrees are taken into consideration when designing related associate degree programs.
Indiana State University	21 - 27	Campus-wide guidelines are for 24 - 32 credit hours of general core courses; programs have flexibility in designing specific requirements.
University of Southern Indiana	28 - 35	University requirements are for a minimum of one half (25 cr. hrs.) of the general core requirement of 50 credit hours for the baccalaureate degree.
Vincennes University	24 - 39	University requires a minimum of 27 credit hours of general core courses for A.S. degrees. Some general education requirements are met by program core courses.
Ivy Tech State College	24 - 42	Recent system-wide curriculum reform guidelines call for general education credit hours to constitute 40% (24 - 42 credit hours) of the total requirements for A.S. degrees. Requirements are program and site specific.

The range of credit hours reported for all institutions except Ivy Tech is based on a sample of programs.

State University -- have core general education requirements that are program specific. At the other four public institutions, the core general education requirements are campus-specific or, in the case of Ivy Tech, system-specific. Ivy Tech State College, which underwent a significant curriculum revision several years ago, has in place a system-wide guideline indicating that core general education requirements should constitute 40 percent (24-42 hours) of the total number of semester credit hours required for the Associate in Science degree.

At each of the seven public Indiana institutions, the A.S. designation implies that a significant amount of the credit earned in the associate degree will transfer into a baccalaureate degree.

Associate of Applied Science Degree Programs

Three public institutions (Indiana University, Ball State University, and the University of Southern Indiana) do not offer any Associate in Applied Science degree programs (see Table 4). Three other public institutions offer either only one A.A.S. program (Indiana State University and Vincennes University) or just two A.A.S. programs (Purdue University).

Only Ivy Tech State College uses the A.A.S. designation extensively. In fact, until fairly recently (November, 1987), the only degree designation authorized for Ivy Tech was the Associate in Applied Science. Consequently, the vast majority of Ivy Tech associate degree programs still carry the A.A.S. designation. At Ivy Tech, the A.A.S. designation generally does not imply significant transfer of credit to a baccalaureate degree program, although it should be noted that some Indiana independent institutions, as well as some out-of-state institutions, will accept all or almost all of the credits earned in an Ivy Tech associate degree, including A.A.S. degrees.

Ivy Tech State College, which underwent a significant curriculum revision several years ago, has in place a system-wide guideline indicating that core general education requirements should constitute 30 percent (18-24 hours) of the total number of semester credit hours required for the Associate in Applied Science degree.

Number of Associate Degree Programs Offered

According to the Commission for Higher Education's Academic Program Inventory (API), Indiana public institutions are authorized to offer a total of 637 associate degree programs, including off-campus sites, which are counted as separate programs. As suggested previously, the majority of these programs (377 or 59 percent) are designated Associate of Science programs (see Table 5). The number of A.S. degree programs offered by public campuses ranges from five (IU-Southeast) to 119 (Vincennes University).

Table 4

ASSOCIATE IN APPLIED SCIENCE (A.A.S.) DEGREES: GENERAL EDUCATION REQUIREMENTS AT INDIANA PUBLIC INSTITUTIONS

	Range of Credit Hours	Comments
Indiana University	N/A	No A.A.S. degrees offered.
Purdue University	8 - 18	Only two A.A.S. degree programs offered: Veterinary Technology Aviation Technology - Aircraft Maintenance
Ball State University	N/A	No A.A.S. degrees offered.
Indiana State University	21 - 27	Only one A.A.S. degree program offered: Early Childhood Education
University of Southern Indiana	N/A	No A.A.S. degrees offered.
Vincennes University	20 - 23	Only one A.A.S degree program offered: General Studies
Ivy Tech State College	18 - 24	Recent system-wide curriculum reform guidelines are 30% (18 - 24 credit hours) of the total requirements for A.A.S. degrees. Requirements are program and site specific.

Range of credit hours reported for all institutions is based on all programs offered, not a sample of programs.

Table 5

ASSOCIATE DEGREE PROGRAMS AT INDIANA PUBLIC INSTITUTIONS BY DEGREE DESIGNATION

	A.S. Degrees	A.A.S. Degrees	A.A. Degrees	Total Number of Associate Degrees
Indiana University Bloomington	8	0	1	9
Indiana University East	7	0	2	9
Indiana University Kokomo	6	0	1	7
Indiana University Northwest	10	0	2	12
Indiana University South Bend	11	0	5	16
Indiana University Southeast	5	0	2	7
IUPUI	20	0	3	23
Subtotal - Indiana University	67	0	16	83
Purdue University-West Lafayette	52	1	0	53
Purdue University-Calumet	13	1	2	16
Purdue University-North Central	11	0	1	12
IPFW	27	0	1	28
Subtotal - Purdue University	103	2	4	109
Ball State University	14	0	12	26
Indiana State University	10	1	4	15
University of Southern Indiana	17	0	0	17
Vincennes University	119	0	4	123
ITSC-Gary	5	32	0	37
ITSC-South Bend	4	23	0	27
ITSC-Ft. Wayne	4	16	0	20
ITSC-Lafayette	4	13	0	17
ITSC-Kokomo	6	14	0	20
ITSC-Muncie	2	25	0	27
ITSC-Terre Haute	2	15	0	17
ITSC-Indianapolis	5	19	0	24
ITSC-Richmond	3	11	0	14
ITSC-Columbus	5	15	0	20
ITSC-Madison	3	8	0	11
ITSC-Evansville	3	14	0	17
ITSC-Sellersburg	1	12	0	13
Subtotal - ITSC	47	217	0	264
Total - All Institutions	377	220	40	637
Percent	59.2%	34.5%	6.3%	100.0%

Note: A.S. column incudes A.S./A.A.S. and A.S./A.A. combinations
A.A. column includes Associate in General Studies
Four Purdue programs with unique designations (e.g. Associate in Consumer and Family Sciences) have been excluded from this count

The second most frequently used designation for two-year degrees (220 or 35 percent) is the Associate of Applied Science. Virtually all of the A.A.S. degree programs offered by public institutions are offered at Ivy Tech.

The least used designation for two-year degrees is the Associate of Arts (40 or six percent of all programs).

Degrees Conferred by Program Major: Indiana and the Nation

For the nation as a whole in 1990, public, two-year institutions conferred about ten times more associate degrees than public, four-year institutions (339,000 versus 35,000, respectively -- see Table 6). In Indiana for that same year, public two-year and four-year institutions conferred about the same number of associate degrees.

For purposes of this analysis, associate degrees conferred were aggregated into six program major general fields, with all other fields lumped together into a seventh aggregate field. Indiana four-year institutions conferred associate degrees in roughly the same proportion in program major fields, with two exceptions. Indiana public universities conferred proportionally fewer associate degrees in the Liberal/General Studies area than did public universities nationwide (18.3 percent and 25.0 percent, respectively), whereas just the opposite is true in Engineering Technologies (20.1 percent and 11.8 percent, respectively). The Purdue-West Lafayette School of Technology is a significant factor in explaining the relatively higher of engineering technology associate degrees conferred by Indiana universities.

With respect to degrees conferred by two-year institutions, Indiana's pattern seems to be more divergent from the national pattern, with three aggregate fields of study differing significantly. Nationally, two-year institutions conferred proportionally many more associate degrees in Liberal/General Studies than did Indiana two-year institutions (32.1 percent and 6.2 percent, respectively). In two fields, Indiana two-year institutions conferred relatively many more degrees than the nation as a whole -- Business (32.3 percent and 21.8 percent, respectively) and Trade and Industrial (20.1 percent and 4.7 percent, respectively).

Information from Other States

To put information from Indiana in context, information was gathered from (1) institutions outside Indiana on degree designations, curricular requirements, and transfer expectations and (2) other state systems regarding recent policy developments.

Institutional Data

A principal focus of data collection and analysis from two-year and four-year institutions in other states had to do with the extent to which degree designations were associated with transfer and/or employment objectives (see Appendix B).

Table 6

ASSOCIATE DEGREES CONFERRED IN MAJOR PROGRAM CATEGORIES
FOR INDIANA AND THE U.S., 1990

		Liberal/ General Studies	Business	Health	Engineerng Tech- nologies	Trade and Industrial	Protective Services	Other	Total
Four-Year Institutions									
U.S.									
	Number	8,837	6,987	8,243	4,179	1,497	1,115	4,443	35,301
	Percent	25.0%	19.8%	23.4%	11.8%	4.2%	3.2%	12.6%	100.0%
Indiana									
	Number	669	829	974	732	114	62	266	3,646
	Percent	18.3%	22.7%	26.7%	20.1%	3.1%	1.7%	7.3%	100.0%
Two-Year Institutions									
U.S.									
	Number	108,887	73,964	50,149	24,206	15,921	11,312	54,848	339,287
	Percent	32.1%	21.8%	14.8%	7.1%	4.7%	3.3%	16.2%	100.0%
Indiana									
	Number	227	1,186	395	401	736	154	569	3,668
	Percent	6.2%	32.3%	10.8%	10.9%	20.1%	4.2%	15.5%	100.0%

Source: U.S. Department of Education, IPEDS data

Associate of Applied Science degrees were generally found to be associated primarily with employment objectives, although some instances were found in which transfer objectives were also associated with the A.A.S. The Associate of Science degrees generally had credit transfer as the primary objective, although many A.S. degree programs -- like A.S. degree programs in Indiana -- also had an employment objective as well.

State Systems

Thirteen states besides Indiana have technical, two-year colleges as a significant component of their public sector: Alabama, Arkansas, Connecticut, Delaware, Georgia, Maine, Minnesota, New Hampshire, North Carolina, Ohio, South Carolina, Tennessee, and Wisconsin. Eleven of the thirteen states (all but Arkansas and Georgia) were contacted to determine similarities and differences with Indiana regarding system structure, mission, program offerings, and transferability of courses.

Of the eleven states, some only have technical colleges or technical community colleges, whereas other states have technical colleges or technical community colleges in addition to comprehensive community colleges (see Appendix C). Comprehensive community colleges put strong emphasis on both the collegiate transfer function, which implies a wide array of general education courses, and the technical education function, which emphasizes career preparation and employability. In contrast, technical colleges focus primarily on providing career-oriented, terminal degree programs designed for immediate employment, and do not focus on the college transfer aspect. Technical colleges usually offer a limited number of general education courses, all of which are in close support of the technical coursework.

With the exception of Delaware, all eleven states contacted for this working paper are undergoing significant changes to their systems. Two states -- Maine and Minnesota -- illustrate the kind of far-reaching changes that some states are considering.

In Maine, the state legislature has created a specific short-term Commission to review the role of the Maine technical college system. It is charged with making recommendations to the legislature about methods to increase access and achievement in the state. This Commission arose out of strong concern for what legislators perceived as a low education attainment rate for the state. The Commission is examining the state's role in "expanding the delivery of two-year postsecondary education -- specifically community college services." Of primary interest in Maine is expanding the liberal studies core to "greatly increase transfer opportunities for students with minimal changes to the institutional infrastructure."

Minnesota is currently undergoing an overhaul of its postsecondary system as a result of a 1991 legislative mandate. The mandate resulted in the 1995 merger at the state level of the governance bodies of the community college, technical college, and college and university systems. The three systems merged into overarching governing system the Minnesota State College and University System. As part of

this legislative mandate, many of the state's community and technical colleges in close proximity are merging. The remaining distinct community or technical colleges are required to establish strong collaborative arrangements to provide students with full range of services.

See Table 7 for additional ovbservations on states contacted for this review.

Findings and Conclusions

1. With respect to the most frequently employed associate degree designation in Indiana, the Associate of Science, all seven Indiana public institutions appear to be using this degree designation consistently. Each institution typically uses the A.S. designation for degree programs that have two purposes: they are career-oriented (i.e. they have immediate employment objectives) and they imply transfer, to a significant extent, into a baccalaureate program.

2. Indiana public institutions routinely use the A.S. designation for career-oriented degree programs, a practice that differs from AACC policy statements. It appears that, like Indiana colleges and universities, many institutions in other states also use the A.S. designation for career-oriented degree programs.

3. The Associate of Applied Science designation is now used almost exclusively by Ivy Tech.

4. In principle, the A.A.S. designation at Ivy Tech is intended to signify that a transfer agreement has not been developed with a four-year institution. In practice -- and with increasing frequency, especially with independent institutions -- Ivy Tech A.A.S. degree programs transfer credits, large amounts in some cases, either through course-by-course arrangements or through program articulation agreements.

5. At Indiana public institutions, the Associate of Arts designation is used infrequently and most often to designate a Liberal Arts or General Studies degree program. A few institutions use the A.A. designation in connection with career-oriented or pre-professional degree programs.

6. Indiana public institutions have very few associate degree programs that use a unique or uncommon degree designation, i.e. something other than an A.S., A.A.S., or A.A.

7. The core general education requirements for associate degrees at Indiana public institutions generally fall within the 24-36 semester credit hour range, although some general education requirements are less than 24 credit hours, or in a few cases, are more than 36 hours.

8. Indiana has an unusual ratio of associate degrees conferred by public two-year institutions to associate degrees conferred by public four-year institutions (10:1 for the nation, 1:1 for Indiana).

9. Most states with a significant technical college presence in their public sector are actively engaged in major efforts to provide or expand transfer opportunities for associate degree graduates.

10. Each reflecting their unique set of circumstances, states with public technical colleges are using a variety of approaches to enhance transfer opportunities, including:

    a) merger of two-year campuses;
    b) merger of two- and four-year system governance structures;
    c) expansion of general education offerings at technical colleges;
    d) addition of technical programs to off-campus, lower-division university centers;
    e) elimination of two-year programs from four-year institutions;
    f) institution-to-institution agreements;
    g) systemwide agreements;
    h) common course numbering systems; and
    i) common general education core requirements.

11. The impetus for these efforts also reflects diversity, including:

    a) legislative mandates;
    b) blue ribbon panels,
    c) state agency policies; and
    d) institutional initiatives.

Table 7

RECENT EFFORTS TO INCREASE TRANSFER IN
ELEVEN OTHER STATES THAT HAVE PUBLIC TECHNICAL COLLEGES

Alabama

- The Alabama state legislature has mandated that by 1998 two-year and four-year institutions develop a common core of courses that will automatically transfer among all public postsecondary institutions in the state. As such a committee is developing a list of 96 credit hour (32 three credit courses) general education courses for automatic transfer. A student will choose which courses to take according to his/her program and all courses taken that are part of the 96 credit core will transfer.

- Alabama has in place a common course directory of over 100 courses that may be accepted for transfer. Transferability of these courses is determined by each four-year institution.

- Alabama has recently developed a software package to facilitate student awareness of transfer courses. The software provides a matrix of the common course directory and all Alabama two- and four-year institutions. It decodes for a student which institution is likely to accept which courses.

- There is currently a movement in Alabama to merge community and technical colleges. Two technical colleges have been merged to date.

Connecticut

- In 1990 the state Technical College system merged with the Community College system to create the Connecticut Technical-Community College System.

- The Board of Trustees of Connecticut Community-Technical Colleges is working with institutions to establish system-wide course transfer agreements in general and technical education.

Delaware

- The Technical and Community Colleges system of Delaware is working to establish greater transferability of courses with four-year institutions. Agreements are being worked out on an institution by institution basis.

Maine

- In 1995 the state legislature commissioned a short-term, blue-ribbon task force to examine the role of the Maine Technical College System with a view toward "expanding the technical college mission to include the community college role."[1]

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[1] *Expanding Community College Service in Maine: The Role of the Maine Technical College System*, Working Paper, January 1996.

Minnesota

- A 1991 Legislative Act required that the state's community college, technical college, and state college and university systems merge into one system under one governance structure -- the Minnesota State College and University System.

- Legislative mandate in 1991 initiated the merger of many of the state's technical and community colleges. Technical and community colleges not merging must submit plans for strong collaborative arrangements with each other.

- Minnesota has developed the Minnesota Transfer Curriculum (MTC). The curriculum is a set of competencies in 10 general education disciplines (social sciences, math, natural science, etc.). Every postsecondary institution must submit a common core of courses that will meet the MTC competencies. Once approved, this core must be accepted for transfer as a block at all other state institutions.

New Hampshire

- New Hampshire is in the process of renaming and restructuring its Technical College system. It will be renamed the New Hampshire Community-Technical College System.

- In consultation with the university system, the new community-technical system is "developing a two-year general education degree that will emphasize science, math, technology, and communications that will be transferable to the colleges and universities in New Hampshire."[2]

- The system is working to expand the present limited number of general education courses to facilitate the general studies degree.

North Carolina

- A 1995 legislative mandate has charged the state higher education system with creating a more seamless process of transfer for students.

- The Community College System is working with two- and four-year institutions to create a common course numbering system, including common course content, to facilitate student transfer.

Ohio

- In 1989, the Ohio General Assembly directed the Ohio Board of Regents to develop and implement a statewide articulation and transfer policy. As a result of the legislation the Transfer Module (TM) was developed . The TM consists of 36-40 credit hours of specified course credits in math, humanities, social science, natural science and interdisciplinary coursework. The block can be completed at any two-year institution and transferred to any postsecondary institution in the state as a block.

[2] "New Hampshire Community-Technical Colleges: The Technical Colleges of Yesterday, For Today and Tomorrow," *TECHnewz*, Vol. 3, No. 1, January 1996.

- In 1993, the Ohio General Assembly mandated that all two-year colleges in Ohio meet nine "service expectations." (Note that Ohio's two-year system has technical colleges, community colleges, and two-year campuses of four-year institutions.) These service expectations require that **all** two-year institutions in the state offer a full complement of services including, technical education programs, transfer programs, a high level of community involvement, etc. The goal of this mandate is to expand services so that "all of the various two-year campuses provide full service at an affordable price."

South Carolina

- The Commission on Higher Education, the State Board for Technical and Comprehensive Education, and technical and four-year institutions have established a list of 72 general education courses that transfer automatically to all public institutions in the state.

- The state legislature in South Carolina has mandated that the state improve transferability of courses in the state. As part of this mandate, the Commission, the Board, and the institutions are currently developing a common course numbering system for its lower division courses and systemwide transfer of a block of general education courses.

- South Carolina is also working to develop a core of technical courses for transfer to four-year institutions throughout the state.

Tennessee

- All two-year and four-year institutions in the state are engaged in a study to develop better statewide articulation and transfer. The effort is driven by university presidents and is an attempt to self-regulate without the involvement of the state legislature.

- Most general education courses will transfer but currently no statewide guarantee of such transfer exists.

- Over the last several years, Tennessee has been working to remove two-year degree programs from its four-year public institutions. Many programs have recently been discontinued; a few still remain.

Wisconsin

- Since 1990, a core of 15 general education credit hours has transferred to campuses in the University of Wisconsin system.

- The University of Wisconsin System is working with the Wisconsin Technical College System to expand the transferability of technical courses to the University.

Appendix A

SELECTED OUT-OF-STATE DEGREES: DEGREE DESIGNATIONS AND PURPOSES

State	Campus	Degree	Purpose
Florida			
	Miami-Dade Community College	AA	Transfer
		AS	Employment
Iowa			
	Des Moine Area Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
		AGS	Unspecified
Illinois			
	College of DuPage	AA	Transfer
		AS	Transfer
		AAS	Employment
		AGS	Meet personal interests
	Elgin Community College	AA	Transfer
		AS	Transfer
		AAS	Employment - some transfer possible
		ALS	Indiv. goals - Transfer and Employment
	Joliet Junior College	AA	Transfer
		AS	Transfer
		AAS	Employment - some transfer possible
	South Suburban College	AA	Transfer
		AS	Transfer
		AAS	Employment
	Southern Illinois University at Carbondale	AAS	Employment
	William Rainey Harper College	AA	Transfer
		AS	Transfer
		AAS	Employment
Kentucky			

	Murray State University	AA	Unspecified
		AS	Unspecified
		ASVTE	Specific Program Transfer
Michigan			
	Ferris State University	AA	Transfer
		AS	Transfer
		AAS	Employment + Transfer
		AAA	Internal Transfer
	Wayne County Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
		AGS	Employment or Transfer
	West Shore Community College	AA	Transfer
		AS	Transfer
		AAAS	Employment
Minnesota			
	Minneapolis Community College	AA	Transfer
		AS	Employment + Transfer
	Normandale Community College	AA	Transfer
		AS	Employment
		AAS	Employment
Missouri			
	St. Louis Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
New York			
	Nassau Community College	AA	Transfer
		AS	Transfer + Employment
		AAS	Employment - some transfer possible
Ohio			
	Cincinnati State Technical & Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
		AAB	Employment
		AIS	Employment

		ATS	Employment
	Columbus State Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
		ATS	Employment
	Cuyahoga Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
		AAB	Employment
		ATS	Employment
	Ohio State Agricultural Technical Institute	AS	Transfer
		AAS	Employment
		ATS	Employment
	Sinclair Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
		AIS	Employment or Transfer
		ATS	Individual Goals
	Stark Technical College	AAS	Employment
		AAB	Employment
		ATS	Employment
		ADN	Employment
	University of Cincinnati Clermont College	AA	Transfer
		AAS	Employment
		AAB	Employment
Oregon			
	Chemeketa Community College	AA	Transfer
		AAS	Employment
		AGS	Transfer or Employment
South Carolina			
	Trident Technical College	AA	Transfer + General Knowledge
		AS	Transfer + General Knowledge
		A. in ...	Employment

		[Specific Field, e.g. Agriculture]	
Tennessee			
	Shelby State Community College	AA	Transfer
		AS	Transfer
		AAS	Employment
Wisconsin			
	Blackhawk Technical College	Associate Degree	Employment
	Gateway Technical College	AAS	Employment
	Madison Area Technical College	AA	General Education + Employment
		AAS	Employment
		AAA	Employment
	Milwaukee Area Technical College	AA	Transfer
		AAS	Employment; some transfer agreements exist
		AAA	Employment; some transfer agreements exist

AA - Associate of Arts
AAA - Associate of Applied Arts
AAAS - Associate of Applied Arts & Sciences
AAB - Associate of Applied Business
AAS - Associate of Applied Science
ADN - Associate Degree of Nursing
AGS - Associate of General Studies
AIS - Associate of Individualized Study
ALS - Associate of Liberal Studies
AS - Associate of Science
ASVTE - Associate of Science of Vocational-Technical Education
ATS - Associate of Technical Study (or Science)

Appendix B

POLICY STATEMENTS BY THE AMERICAN ASSOCIATION OF COMMUNITY COLLEGES (AACC)

AACC Policy Statement

American Association of Community Colleges, One Dupont Circle, NW, Suite 410, Washington, DC 20036, 202.728.0200, fax 202.833.2467

The Associate Degree

The Associate Degree

The associate degree program is hereby affirmed as central to the mission of the community, technical, and junior college. The associate degree reflects the larger goals of educational attainment the institution holds for its students. It is a means through which the institution develops and maintains integrity in its educational programs. When appropriately defined, the associate degree becomes an integrating force for the institution, serves as an important student guide, and requires commitment on the part of the student for program completion.

Emphasis on the associate degree program indicates to faculty, administrators, students, and society that the community, technical, and junior college has a vision of what it means to be an educated person and affirms the college's commitment to program continuity, coherence, and completion. The associate degree must indicate that the holder has developed proficiencies sufficient to prepare for upper division collegiate work, or to enter directly into a specific occupation with confidence. The degree should be awarded only for completion of a coherent program of study designed for a specific purpose.

The Responsibility for Quality

The institution offering an associate degree assumes a responsibility to students and the public to establish and maintain excellence in all educational programs. In offering such a degree program the individual institution recognizes the obligation to certify that the student receiving the degree has indeed attained associate degree levels of achievement. When an institution awards the associate degree it is providing the individual with the currency to negotiate the next step, whether that step be into full-time employment or into a baccalaureate degree program. The associate degree should be recognized by employers and baccalaureate degree granting institutions as the best indication that a student has attained the knowledge and skills necessary to enter a field of work or an upper division college program.

Quality community, technical, and junior colleges demand substantial investments, and the investments return great dividends to individuals and to our nation. Because of the investment required to build and maintain a quality program, the institution has a professional obligation to develop programs where resources are sufficient to ensure quality. In addition, the institution, in partnership with the communities it serves, must provide straightforward information to appropriate decision makers about the resources required to maintain a quality program.

Organization of the Curriculum

Working under the direction of the appropriate administrative leaders, it is the responsibility of the teaching faculty and academic staff to design, monitor, and evaluate the specific associate degree programs offered by the institution. This process should involve consultation with others, both inside and outside the institution. The associate degree program links learning that has gone before with learning that will come after. Therefore, those concerned with framing the associate degree requirements must not approach the task in isolation. Full attention must be given to continuity in learning, as well as to the proficiencies required for an individual to achieve career satisfaction. Community college leaders are encouraged to maintain a continuing dialogue with high school administrators and faculty, as well as with college and university decision makers, with regard to program scope and sequence. The student should experience little or no loss of continuity, or loss of credits, when moving from one level of education to another.

The resulting associate degree program should consist of a coherent and tightly knit sequence of courses capped by an evaluation process that measures the outcomes of the learning process, either at the course level, comprehensively, or both. All degree programs must include the opportunity for the student to demonstrate proficiency in the use of language and computation, for whatever their career goals, students will be called upon to exercise competence in these areas.

In addition, all associate degree programs should reflect those characteristics that help define what constitutes an educated person. Such characteristics include a level of general education that enables the individual to understand and appreciate his/her culture and environment; the development of a system of personal values based on accepted ethics that lead to civic and social responsibility; and the attainment of skills in analysis, communication, qualification, and synthesis necessary for further growth as a lifespan learner and a productive member of society. It is understood that not all of these elements are attained fully through organized courses, but that the intellectual and social climate of the institution and the variety of other educational activities engaged in by students may play an important part. It is incumbent upon

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the institution to develop appropriate procedures to assess required learning gained outside the formal course structure.

The Associate in Arts and Associate in Science Degrees

These degrees primarily prepare the student to transfer to an upper division baccalaureate degree program. Programs leading to these degrees are similar in nature. The general trend has been to offer the associate in science degree to students who wish to major in engineering, agriculture, or the sciences with heavy undergraduate requirements in mathematics and science. The associate in arts degree gives emphasis to those majoring in the social sciences, humanities, arts, and similar subjects. However, it should be noted that the distinction between the two degrees and the eventual baccalaureate major has become somewhat blurred in recent years. Students awarded associate in arts or associate in science degrees should be accepted as junior level transfers in baccalaureate degree granting institutions.

Associate in Applied Science Degree

The second type of degree program is designed to lead the individual directly to employment in a specific career. While the titles given these degrees vary considerably among community, technical, and junior colleges, the most common title is associate in applied science. Other titles used are associate in business, associate in data processing, or other specific occupations, and associate in applied arts and sciences. It should be noted that the number of degrees awarded in these occupational areas has been increasing in the last two decades. In some instances, particularly in the health-related fields, the degree is a prerequisite for taking a licensing examination. Some institutions belong to voluntary specialized accrediting agencies that set qualitative and quantitative degree standards for their programs. Although the objective of the associate in applied science degree is to enhance employment opportunities, some baccalaureate degree granting institutions have developed upper division programs to recognize this degree for transfer of credits. This trend is applauded and encouraged.

Associate Degree Titles

In recent years there has been a proliferation of titles of associate degrees. This has been true especially in occupational areas where some institutions offer many different degrees in specific technologies. In an attempt to reduce the number of these degrees and to avoid confusion as to the level of academic achievement attained, it is highly recommended that:

a. The titles associate in arts and associate in science degrees be used without further designation.
b. The associate in applied science degree may have additional designations to denote special fields of study such as nursing, computer technology, or law enforcement.
c. For all associate degrees the transcript of a student should reveal the exact nature of the program completed and whether courses are recommended for transfer to baccalaureate degree programs.
d. The names or designations used for associate degrees be limited to the above three times.

Guidelines for the Evaluation of Programs

Many factors may enter into the evaluation of associate degree programs. The most basic and important elements relate to the objectives the institution itself has set for the degree program. Does the program, for example, provide the foundation in general education the institution has set as a goal? Does the program provide students with the competencies required to compete successfully in a career role? The evaluation of degree programs should create a continuing dialogue within the institution concerning associate degree quality and the relative success of the college's graduates. Creative faculties will find many effective ways of assessing their degree programs. The systematic follow-up of the college's graduates must not be overlooked as a necessary evaluation tool.

Ideally, the evaluation of associate degree programs in community, technical, and junior colleges should be accomplished by the institutions themselves and not by state or federal agencies. Regional accrediting associations serve as self-regulatory bodies to help institutions monitor and evaluate the quality of their associate degree programs. In order that accountability for such evaluations may be clearly understood, institutions should designate institution-wide oversight bodies to evaluate the continuing balance and quality of associate degree programs.

Looking Ahead

This policy statement is limited to the associate degree, thus leaving unexamined a host of other important elements of the community, technical, and junior college mission. These institutions are attended by many individuals for valid reasons other than obtaining a degree. Continuing education and non-credit courses are also reaffirmed as important to the mission of community, technical, and junior colleges. Nothing in this policy statement should be interpreted as discouraging colleges from admitting students who do not have degree objectives to all courses for which they are qualified and from which they will benefit.

While this policy statement is limited to a definition of the associate degree, it is recognized that further work should be pursued to define other community college outcome measures. Such study is important to the future of community, technical, and junior colleges, particularly as they attempt to influence funding agencies and legislators, and to meet a greater diversity of individual human need.

AACC Policy Statement

American Association of Community Colleges, One Dupont Circle, NW, Suite 410, Washington, DC 20036, 202/728-0200, fax 202/833-2467

The Associate in Applied Science Degree

Adopted April 1987

Introduction

The quality of American education is a prime issue of national concern in this decade. The gulf between societal expectation and realization was first identified in the elementary and secondary schools with the label of mediocrity being liberally applied. Soon after, higher education also came under scrutiny. By the early 1980's, the American Association of Community Colleges (AACC) had already begun a study of the Associate Degree which serves as the curriculum base for the 1,200 community, technical, and junior colleges in the nation. The conclusions and recommendations of this study provided basic guidelines for the associate degree which were accepted as an official policy statement by the Board of Directors of AACC in July of 1984.

The dialogue within the two-year college community generated by this statement has sparked a closer look at a specific type of associate degree—the Associate in Applied Science (AAS). This most recent and perhaps most promising variant is designed primarily to prepare students for immediate employment in a career field without foregoing the opportunity for further education. The AACC Policy Statement included the following reference to the Associate in Applied Science Degree:

> The second type of degree program is designed to lead the individual directly to employment in a specific career. While the titles given these degrees vary considerably among community, technical, and junior colleges, the most common title is Associate in Applied Science. Other titles used are Associate in Business, Associate in Data Processing, or other specific occupations, and Associate in Applied Arts and Sciences. It should be noted that the number of degrees awarded in these occupational areas has been increasing in the last two decades. In some instances, particularly in the health-related fields, the degree is a prerequisite for taking a licensing examination. Some institutions belong to voluntary specialized accrediting agencies that set qualitative degree standards for their programs. Although the objective of the Associate in Applied Science degree is to enhance employment opportunities, some baccalaureate degree granting institutions have developed upper division programs to recognize this degree for transfer of credits. This trend is applauded and encouraged.

Postsecondary occupational education, including AAS degree programs, increased dramatically between 1960 and 1970. According to the National Center for Educational Statistics, 43% of all associate degrees awarded in this decade were occupational in nature. By 1980, according to the preliminary presentation of the AACC National Task Force to Redefine the Associate Degree, this figure had risen to 62.5%. The AAS degree, or similar occupational degrees, had become the choice of the majority of community, technical, and junior college graduates.

Statement of Purpose

In response to this trend, the National Council for Occupational Education (NCOE), an affiliate of AACC, saw available an urgent need to identify criteria leading toward excellence in the AAS degree so that it may become the cornerstone for a national program of human resource development. It will then become more effective for a wide range of occupational education and as a national employment credential.

In the interest of brevity, as well as avoiding areas already dealt with in other recent reports of undergraduate education, this report is primarily concerned with the scope, form, substance, and image of the degree—all in a national context. As in the preceding work of the AACC National Task Force to Redefine the Associate Degree, the overall objective of this report is to clarify the function of this specific associate degree and to recommend ways of strengthening it. This report proposes, with ample feedback from the field, criteria for excellence in AAS degree programs.

Criteria for Excellence in AAS Degree Programs

1. *Associate degree programs designed primarily for immediate employment should be designated as an Associate in Applied Science Degree Program.*

Considerable variation in associate degree titles exist across the nation, particularly in occupational education. Although some states use the Associate in Science (AS) degree to designate two-year occupational programs, by far the more common usage is the AAS. Common degree terminology should improve national visibility, reduce confusion in our mobile economic society, increase the credibility of the AAS

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degree, and form the basis for a nationwide program of human resource development.

2. *The AAS degree should be identified with a specialty designation.*

This identification of a specialty or major, currently common practice in many institutions, implies relevant preparation for employment in a specific area of work. Even though there are advantages in labeling the degree program as specifically as possible, this should not preclude designations that cover a field of study rather than a single specialty, e.g., Associate in Applied Science Degree in Health Occupations.

3. *AAS degree programs must be responsive to the employment needs of business industry, public agencies, the military, and entrepreneurship.*

The single most important purpose of the AAS degree is to prepare students to enter directly into specific occupations. For the degree to achieve greater acceptance as an employment credential, effective articulation must be developed between the educational institution and the employers of the AAS degree graduates. The most important facet of the linkage with employers is the maintenance of a timely and effective curriculum reflecting current practices in the work world. This relationship with employers, however, breaks with academic tradition in that AAS degree curricula are not initiated and developed solely within the educational institution. This partnership between the institutions and the potential employer needs to be nurtured continuously.

4. *All components of the AAS degree requirements should become outcome oriented.*

Common practice in higher education is to define course and program requirements in terms of subject matter topics. Instead, faculty and academic officers from all components of the program should develop and disseminate a statement of the course and program outcomes that students must achieve. While not all of the course and program outcomes can easily be measured, there remains a responsibility to define the knowledge, skills, and attitudes students are expected to attain. It is expected that this outcome orientation will apply to all components of the degree, including general education, related studies, and technical specialty courses. Evaluation measures and procedures should be routinely utilized to assess the adequacy of each course in meeting stated outcomes. Special attention should be given to measuring the success of graduates on the job.

5. *The AAS degree requirements should be limited to 60 to 72 semester credit hours or 90 to 108 quarter credit hours.*

There is a growing tendency to expand credit hour requirements for occupational programs to meet a variety of pressures including those from specialized accreditation and licensure agencies. Semester credit hours beyond 60 (90 quarter hours) lengthen and intensify the program beyond the normal academic load. Fifteen credit hours per term is a reasonable and challenging load for full-time students. Requirements beyond 60 semester hours (90 quarter hours) should be fully justified in terms of program outcomes. Remedial and developmental work should be in addition to the collegiate level requirements of the degree program but should, whenever possible, be pursued concurrent with skill training to enhance intent and relevance.

6. *The technical specialty component of the AAS degree should constitute 50% to 75% of the course credits.*

Although general education is increasingly more important in an informational society, the credibility of occupational programs rests with the ability of the AAS degree graduate to function at the technical and mid-management level. The technical specialty component should emphasize an applications orientation through laboratory, clinical and work experiences sufficient to qualify for entry-level employment.

7. *The general education component of AAS degree programs should constitute a minimum of 25% of the course credits with the combination of general education and related studies constituting up to 50% of the course credits.*

There is an increased recognition of the importance of general education and related studies as integral components of occupational education. Increasingly, the ability to think, reason, compute, communicate and adapt to change are essential if workers at all levels are to remain employable and cope with the expanding knowledge base. General education also includes human development in civic, consumer, environmental, and social responsibilities. Related studies typically achieve a dual purpose of enhancing general human development and providing a basic foundation for the pursuit of more advanced occupational goals. General education and related studies outcomes should be identified, implemented, and measured by the institution.

8. *Although open admission to the institution for all adults is a cardinal characteristic of most community, technical, and junior colleges, minimum criteria for admission to AAS degree programs are essential.*

Admission requirements should be established on an individual program basis to assure that the entering student has a reasonable probability for success and that course and program standards are maintained. Where appropriate, preassessment should be included in all admission requirements. Such requirements must be accompanied by maximum opportunities for access to programs by students who do not initially meet the organized requirements. Developmental or pretechnical certificate programs, tutoring, and/or special laboratory assistance are examples of how this may be accomplished.

9. *AAS degree programs should be supported by student services designed systematically for the needs of career-oriented students.*

As a result of the vigorous growth of occupation programs, student services now play a much larger and more important, even critical, role in student success than previously. Some colleges have even expanded the definition of "student" to include the entire community of the adult work force and now offer services to the currently employed and the unemployed. Occupational education has thus expanded horizons and markets of two-year institutions immeasurably but must now provide for success and promotability as well as entry into employment. Continuous interaction with students should begin with preadmission testing, assessment, and counseling to assure a reasonable match of student aspirations and skills with programmatic requirements and expectations. These services should include career development activities which lead to successful placement and/or transfer.

10. *A curriculum structure with multiple exit/re-entry points should be considered for the AAS degree whenever possible.*

A multiple exit/re-entry structure for the AAS degree has distinct advantages for many students who because of work, family or other obligations do not complete the AAS degree in a continuous mode. Such students necessarily take advantage of convenient "stop-outs" where they can complete a segment of the program with some degree of closure before going further. One such common "building block" approach is a series of certificates which represent flexible components of the AAS degree program that may eventually be converted into the full degree. In this sense, the degree becomes a credential increasingly representative of technical and mid-management level employment, a natural step up from certificates generally identified with entry-level employment plateaus. The technical specialty component of the AAS degree should be provided as early in the program as possible. Exit/re-entry points at the end of the first term and/or first year of the program should he given particular consideration.

11. *Credit toward the AAS degree should be awarded for knowledge and skills acquired through prior experiences.*

Increasingly, the concept that learning is learning, regardless of the source, is gaining acceptance. The ultimate determinant of what is creditable must, however, reside in college policy determined with substantial faculty involvement. Currently, credit is being awarded by many colleges for prior knowledge and skills acquired from many sources including proprietary schools, the military, labor unions, community-based organizations, in-service programs of business and industry, work experience, independent study, and examinations. Care must be exercised to assure that the integrity of program outcomes is maintained when such experiences are assessed.

12. *AAS degree curricula should be articulated with appropriate general and vocational secondary schools.*

There is a trend toward increased articulation between secondary and postsecondary institutions. The advantages of such articulation are to encourage earlier goal orientation, provide possible advanced placement and avoid unnecessary duplication. The growing use of outcomes as a basis for instruction and learning should make program comparisons much easier than the previous use of course titles and catalog descriptions.

13. *AAS degree curricula should be articulated with receptive and appropriate four-year institutions through the cooperative planning and implementation of transfer agreements including two + two curricula.*

Although AAS degree programs are designed primarily to prepare students for employment, they can no longer be considered terminal. In addition to the necessity for lifelong learning in response to the knowledge explosion, students can expect to make several career changes during their lifetime. Further education, including work toward a baccalaureate degree, should be anticipated for AAS degree graduates. Therefore, articulation agreements should be initiated by two-year institutions in those programs with the greatest potential for transfer. However, the occupational outcomes of AAS degree programs should not be subverted to the transfer potential.

14. *Selected AAS degree programs should be networked among two-year institutions at the local, state, and national levels.*

There is increasing interest in developing consistency and comparability among similar occupational programs on state and national levels. As the AAS degree becomes universally accepted as an employment credential, it will be feasible to develop selected programs with comparable outcomes across the nation without sacrificing local flexibility. Institutions developing or revising AAS degree programs should consider comparability and consistency with similar occupational programs. Further networking is encouraged and should be facilitated by educational institutions, state agencies, and other regional and national organizations.

Summary

The criteria for excellence are essential for the AAS degree to achieve its potential both as a national employment credential and the curricular foundation for the occupational mission of community, technical, and junior colleges. In highlighted forms, these criteria would help to assure that AAS degree programs are:

1. Clear and consistent in titles, length, components and outcomes—publicized and documented for all to see and know.

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2. Articulated continuously with employers, four year colleges, secondary schools, and the noncollegiate sector including specialized accreditation, credentialing, certification, and licensing agencies.

3. Flexible in structure for our varied adult clientele, with multiple exit/re-entry points which optionally may be compounded to attain the goal of technical and/or mid-management level employment equated with the AAS degree.

4. Open to students on a selective basis with full opportunity to remedy deficiencies in meeting admission requirements.

5. Supported by student services fitted to the occupationally oriented needs of AAS degree students.

6. Part of an expansive and universal definition and categorization of occupational education that conveys a positive image.

7. Part of a national network serving the comparable educational and training needs of the nation, states, and communities.

Implicit in these criteria for excellence in the AAS degree is the assumption that community, technical, and junior colleges have taken on preparation for employment as a major function of their emerging identity. That identity will be strengthened by developing criteria for excellence in the AAS degree, the curricular cornerstone of community college occupationally oriented training and education. Concurrent with enhanced identity may come national acceptance of the 1,200 community, technical, and junior colleges as the preferred delivery system for a national program of human resource development embracing job and career oriented training, education, and services for the entire adult community—preemployed, employed, and unemployed. Such a goal is humanitarian. It is also central to the national self-interest to insure an educated and trained work force prepared for present and future manpower needs which, in turn, helps maintain a strong competitive position for our nation in the world economy. The AAS degree provides the curriculum base from which such a national program can be developed.

Appendix C

BACKGROUND INFORMATION ON SELECTED STATES WITH A SIGNIFICANT PUBLIC TECHNICAL COLLEGE PRESENCE

	Alabama	Connecticut	Delaware	Maine	Minnesota	New Hampshire	North Carolina	Ohio	South Carolina	Tennessee	Wisconsin	Indiana
Population – 1990	4,219,000	3,275,000	706,000	1,240,000	4,567,000	1,137,000	7,070,000	11,102,000	3,664,000	5,175,000	5,082,000	5,752,000
2-year institutions	20 Community Colleges; 9 Technical Colleges; 2 Junior Colleges	2 Community Technical Colleges	3 Technical-Community Colleges	7 Technical Colleges	55 Campuses of the Technical and Community College System	4 Community-Technical Colleges	50 Community Colleges 9 Technical Colleges	21 Community Colleges 8 Technical Colleges	16 Technical Colleges	8 Community Colleges 2 Tech Colleges 2 Technical-Commuinty Colleges	16 Technical Colleges	13 Technical Colleges 1 Community College
Extent to which Public 4-year Institution Offering of Associate Degrees	1 UA campus offers two-year degrees	5, two-year branches of UConn offer two-year degrees	UD offers very limited two-year degrees	All institutions offer two-year degrees	limited two-year degree opportunities at two-year campuses	All institutions offer two-year degrees	2, four-year campuses offer vey limited two-year degrees	29 Regional two-year campuses of four-year institutions	5, two-year branches of USC offer two-year degrees	A few four-year institutions offer two-year degrees. But eliminating these offerings	13, two-year centers of UW	All institutions offer two-year degrees
Degrees Conferred-FY90												
2-year	13,891	3,514	799	528	7,307	968	9,525	11,400	4,001	4,034	7,083	3,668
4-year	723	112	15	631	532	553	91	3,954	198	861	84	3,646
Total	14,614	3,626	814	1,159	7,839	1,521	9,616	15,354	4,199	4,895	7,167	7,314
Residents 25 years + holding 2-year degree - 1990	4.97%	6.61%	6.45%	6.90%	8.56%	8.06%	6.82%	5.33%	6.33%	4.15%	7.12%	5.29%

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